

# **Cannabis Vertical Farming Market Size, Share & Trends Analysis Report By Structure (Shipping Container, Building-based), By Component, By Growing Mechanism (Aeroponics, Hydroponics, Aquaponics), By Application, By Region, And Segment Forecasts, 2025 - 2030**

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## **Abstracts**

This report can be delivered to the clients within 5 Business Days

### **Cannabis Vertical Farming Market Growth & Trends**

The global cannabis vertical farming market size is anticipated to reach USD 1,377.2 million by 2030, according to a new report by Grand View Research, Inc. The market is projected to grow at a CAGR of 19.3% from 2025 to 2030. The substantial growth is fueled considerably by legislative changes across the globe. Legalization of cannabis for medical and recreational use in various regions has created new markets and attracted investment prospects. For instance, in 2018, Canada legalized recreational cannabis, creating a thriving legal market that fostered development of sophisticated cultivation methods, including vertical farming.

Additionally, in 2020, Mexico passed legislation to legalize recreational cannabis, opening up a substantial market for cultivation and sales. Such changes have driven investments and market expansion. Vertical farming techniques provide precise control over environmental conditions, ensuring consistent product quality. For instance, Canopy Growth utilizes vertical farming to maintain strict standards for its cannabis strains, offering consumers reliable and high-quality products.

Vertical farming's resource-efficient nature is another driving factor for cannabis cultivation. Vertical farms use hydroponic or aeroponic systems, significantly reducing water usage compared to traditional soil-based cultivation. It significantly reduces water consumption, which is vital in regions with water scarcity. Urban-Gro, a company specializing in controlled environment agriculture services, collaborates with urban cannabis cultivators to establish water-efficient vertical farming systems, particularly in water-sensitive urban areas like Denver.

Integration of advanced technologies like automation and artificial intelligence (AI) enhances crop yields and efficiency in vertical farming. Furthermore, MedMen, a cannabis retailer, employs automation in its facilities to optimize production processes. Additionally, sustainability practices have gained importance, aligning with consumers' demand for organic and eco-friendly cannabis products. Companies like Green Relief focus on sustainable vertical farming methods to reduce waste and energy consumption, catering to eco-conscious consumers.

Increasing production of biopharmaceutical products necessitates reliable and consistent sources of pharmaceutical-grade cannabis, which vertical farming provides through precise control over cultivation conditions. Vertical farming ensures a steady supply of high-quality cannabis, meeting stringent requirements of the biopharmaceutical industry for therapeutic compounds such as cannabidiol (CBD) and delta-9-tetrahydrocannabinol (THC). Strategic placement of vertical farms near urban centers reduces transportation costs, resulting in fresher and more affordable cannabis products. PharmHouse, a recreational and medical marijuana dispensary located in Michigan, has positioned its vertical farms to serve local markets efficiently, reducing transportation expenses and minimizing the environmental impact of long-distance shipping.

## Cannabis Vertical Farming Market Report Highlights

Rising demand for biopharmaceutical products necessitates dependable sources of pharmaceutical-grade cannabis, which vertical farming delivers with precise control. This is expected to bode well for this market's growth.

Based on structure, shipping container segment accounted for the largest revenue share in 2024, owing to this structure's water-efficient design, stack-ability, cost-effectiveness, and abundant supply of unused shipping containers to drive growth of container-

based farming.

Based on farming component, hardware segment accounted for the largest revenue share in 2024, emphasizing its crucial role in regulating and maintaining optimal growing conditions within vertical farms. These hardware components are vital for ensuring the controlled environment necessary for successful cannabis cultivation, highlighting their fundamental role in the market.

Based on growing mechanism, hydroponics segment held the largest market share in 2024 due to cost-effectiveness, disease prevention, precise nutrient control, and substantial water efficiency, making hydroponics a favored cultivation method for cannabis.

Based on application, medical cannabis segment is also expected to register the fastest CAGR from 2025 to 2030. Rapid growth of medical cannabis vertical farming is driven by its suitability for cultivating high-quality medical-grade cannabis through precise environmental control, consistent quality, year-round production, enhanced security, reduced disease and pest risks, efficient space utilization, and optimized resource use, meeting the stringent requirements for medical cannabis cultivation.

North America is expected to witness significant growth over the forecast period, driven by increasing legalization movement and regulatory changes, such as potential reclassification of marijuana under the Controlled Substances Act, fostering innovation and investment in vertical farming within the cannabis industry.

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